Tuesday, 12/5/2006 8:19:57 AM
Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	**Drawing Name**	: BRACKET ASSEMBLY
Job Number	: 29817		
Estimate Number	: 10279		
P.O. Number	: N/A	**Part Number**	: D3121143
This Issue	: 12/5/2006 **S.O. No.** : N/A	**Drawing Number**	: D3121 REV D
Prsht Rev.	: NC	**Project Number**	: N/A
First Issue	: N/A **Type** : MACHINED.PARTS	**Drawing Revision**	: D
Previous Run	: 29398	**Material**	: N/A
Written By	:	**Due Date**	: 1/5/2007 **Qty:** 8 **Um:** Each
Checked & Approved By	: 06 12 05		
Comment	: Est Rev:Prsht.A 04.02.18 New issue KJ/DS		

Additional Product

Job Number:

Seq. #:	Machine Or Operation:	Description :
1.0	M174B1000X02000	17-4 SS Bar

Comment: Qty.: 0.3864 f(s)/Unit Total : 3.0912 f(s)
Material: 17-4 SS Bar per AMS 5604/5643
(M17-4-B1.000x02.000)
Identify for D3121-113
Batch: M101422 06/12/20

2.0	BAND SAW	BAND SAW

Comment: BAND SAW
Cut blanks: (1.000" x 2.000") 4.425" long 06/12/20

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1

Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3121-113 as per Folio FA330 and Dwg D3121
Identify as D3121-113

2-Deburr

3-Scribe batch number SA/mk 06/12/23 8

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE

Comment: INSPECT PARTS AS THEY COME OFF MACHINE SA/mk 06/12/23 8

Form: rprocess

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3121-143 PAR #: N/A Fault Category: Machined Parts NCR: (Yes) No DQA: [signature] Date: 07/01/08

QA: N/C Closed: [signature] Date: 07.01.09

NCR: 29817		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B: Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
06.12.21	3.0	"Y" origin was off by .020". 2 parts	[signature] QS1042	retake origin scrap and replace	[signature] 07/01/03	[signature] 07-01-03	[signature] QS1042	[signature] 07-01-03
06.12.22	3.0	part flew off of jig while being machined. 3 parts	[signature] QS1042	change holding method!!! or buy better material??? scrap and replace	SD 06.12.22	[signature] 07.01.03	[signature] QS1042	[signature] 07-01-03

NOTE: Date & initial all entries

Date: Tuesday, 12/5/2006 8:19:57 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services **Drawing Name:** BRACKET ASSEMBLY

Job Number: 29817 **Part Number:** D3121143

Job Number:

Seq. #:	Machine Or Operation:	Description :
5.0	QC8	SECOND CHECK

Comment: SECOND CHECK J.L 07/01/03

6.0	D312121	Bolt

Comment: Qty.: 2.0000 Each(s)/Unit Total : 16.0000 Each(s)
Pick:
Qty Part Number Description Batch
2 D3121-21 Bolt ~~B28828~~ B28835
MF 07-01-04

7.0	D3121241	Bearing Assembly

Comment: Qty.: 2.0000 Each(s)/Unit Total : 16.0000 Each(s)
Pick:
Qty Part Number Description Batch
2 D3121-241 Bearing Ass B27413 x4mx B29829 x12mx MF 07-01-04

8.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1

Comment: SMALL & MEDIUM FAB RESOURCE 1
Assemble D3121-143 as per Dwg D3121.
MF 07-01-04 (8)

9.0	QC5	INSPECT WORK TO CURRENT STEP

Comment: INSPECT WORK TO CURRENT STEP 07/01/04 (8)

10.0	PACKAGING 1	PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1
Identify and Stock
Location:_____ ST408 7/01/05 (8)

11.0	QC21	FINAL INSPECTION/W/O RELEASE

Comment: FINAL INSPECTION/W/O RELEASE 07/01/08

Job Completion 7.01.08

Form: rprocess

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

QA: N/C Closed: _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	29817
Description: Bracket	Part Number:	D3121-113
Inspection Dwg: D3121 Rev: D		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.080	+/-0.010	0.075	✓			
0.300	+/-0.010	0.300	✓			
R0.375	+/-0.010	R.375	✓			
1.54	+/-0.030	1.54	✓			
0.350	+/-0.010	.352	✓			
R0.250	+/-0.010	R.250	✓			
1.800	+/-0.030	1.803	✓			
Ø0.392	+0.002/-0.000	Ø.392	✓			
Ø0.201	+0.005/-0.000	Ø.201	✓			
0.100	+/-0.010	.098	✓			
2.540	+/-0.010	2.540	✓			
1.590	+/-0.010	1.591	✓			
0.160	+/-0.010	.161	✓			
0.400	+/-0.010	.396	✓			
1.220	+/-0.010	1.220	✓			
1.600	+/-0.010	1.602	✓			
3.80	+/-0.030	3.810	✓			
1.800	+/-0.010	1.803	✓			
R0.500	+/-0.010	R.500	✓			
0.130	+/-0.010	.125	✓			
3.41	+/-0.030	3.410	✓			
3.65	+/-0.030	3.655	✓			
2.24	+/-0.030	2.210	✓			
45°	+/-0.1°	45°	✓			
R0.250	+/-0.010	R.250	✓			
3.97	+/-0.030	3.976	✓			
R0.38	+/-0.030	R.375	✓			
Ø0.392	+0.002/-0.000	Ø.392	✓			
Ø0.201	+0.005/-0.000	Ø.201	✓			
0.100	+/-0.010	.100	✓			
0.268	+/-0.010	.268	✓			
R0.260	+/-0.010	R.260	✓			
0.080	+/-0.010	.075	✓			
0.300	+/-0.010	.300	✓			

DART AEROSPACE LTD	Work Order:	29819
Description: Bracket	Part Number:	D3121-113
Inspection Dwg: D3121 **Rev:** D		Page 2 of 2

FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.381	+/-0.010	.389	✓			
0.201	+/-0.010	.203	✓			
0.580	+/-0.010	.576	✓			
0.400	+/-0.010	.398	✓			
100°	+/-0.1°	100°	✓			
0.32	+/-0.010	.030	✓			

Measured by:	SD
Date:	06.12.21

Audited by:	J.L
Date:	07/01/03

Prototype Approval:	N/A
Date:	N/A

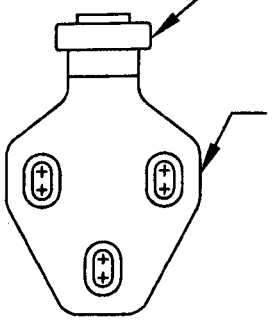
Rev	Date	Change	Revised by	Approved
A	03.12.08	New Issue P/O D3121-143	KJ/RF	
B	04.05.05	Dimensions changed/re-arranged per Dwg revision	KJ/JLM	
C	06.06.14	Dwg Rev. updated	KJ/JLM	

DART

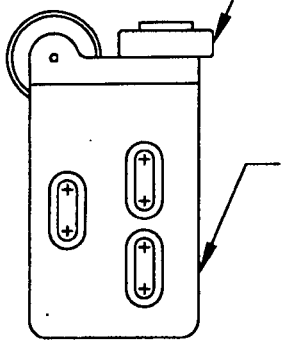
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3121 — REV. D — SHEET 1 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY — SCALE 1:2

A	02.04.15	NEW ISSUE
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD −141/−143/−144/−145/−146
C	04.02.17	ADD CLEARANCE; USE −241 BEARING
D	06.05.17	D3121−25 CAP WAS 1.024, NOW 1.000

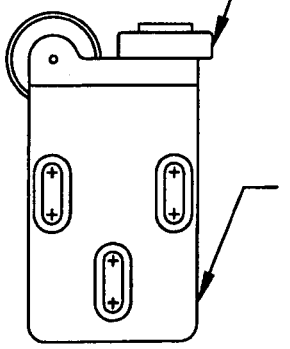
RELEASED
06.06.02



D3121−041 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30−23000−33)



D3121−043 (SHOWN) / D3121−044 (OPPOSITE) BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30−23000−37/−38)



D3121−045 (SHOWN) / D3121−046 (OPPOSITE) BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30−23000−35/−36)

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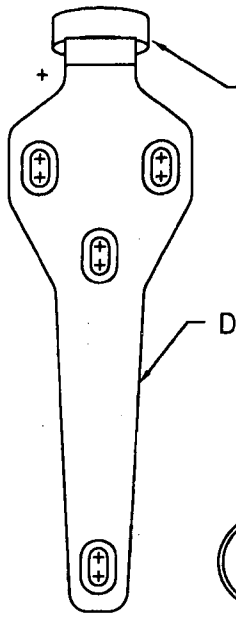
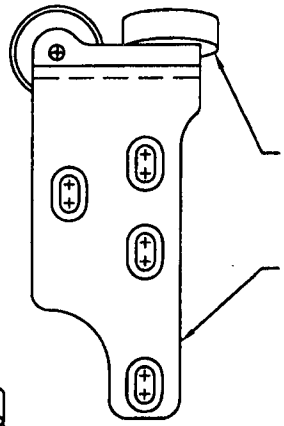
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:2

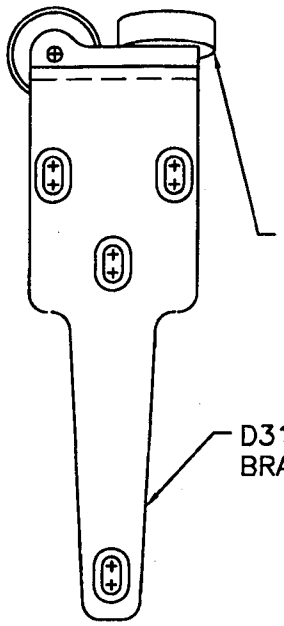


D3121-141 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23001-01)

RELEASED
06.06.02



D3121-143 (SHOWN) / D3121-144 (OPPOSITE) BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-145 (SHOWN) / D3121-146 (OPPOSITE) BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23000-05/-06)

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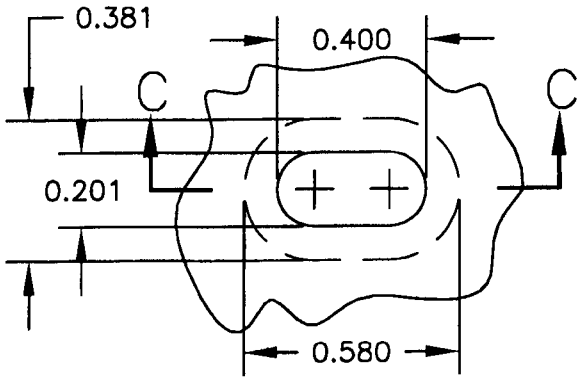
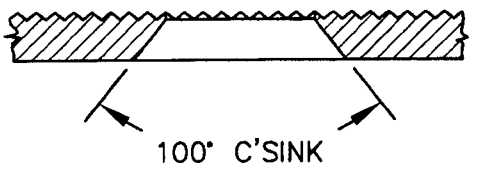
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:1

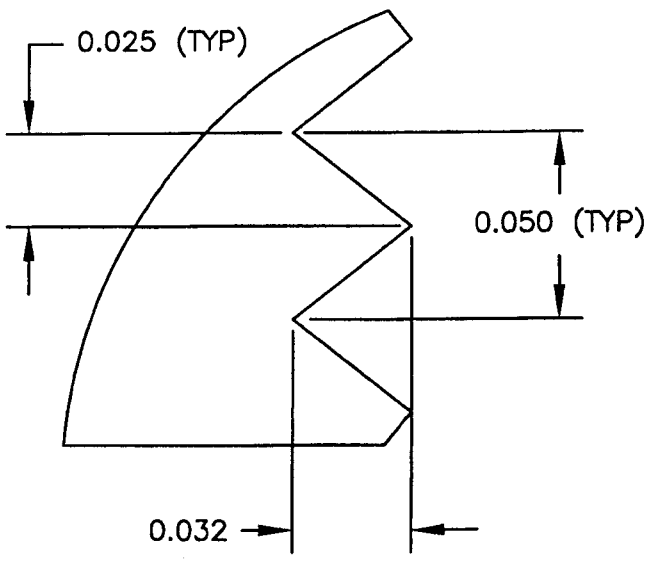
DETAIL A:
SLOT DETAIL
SCALE 2:1
VIEW ROTATED





SECTION C–C

DETAIL B:
RIDGE DETAIL
PARTIAL SECTION
SCALE 1:20



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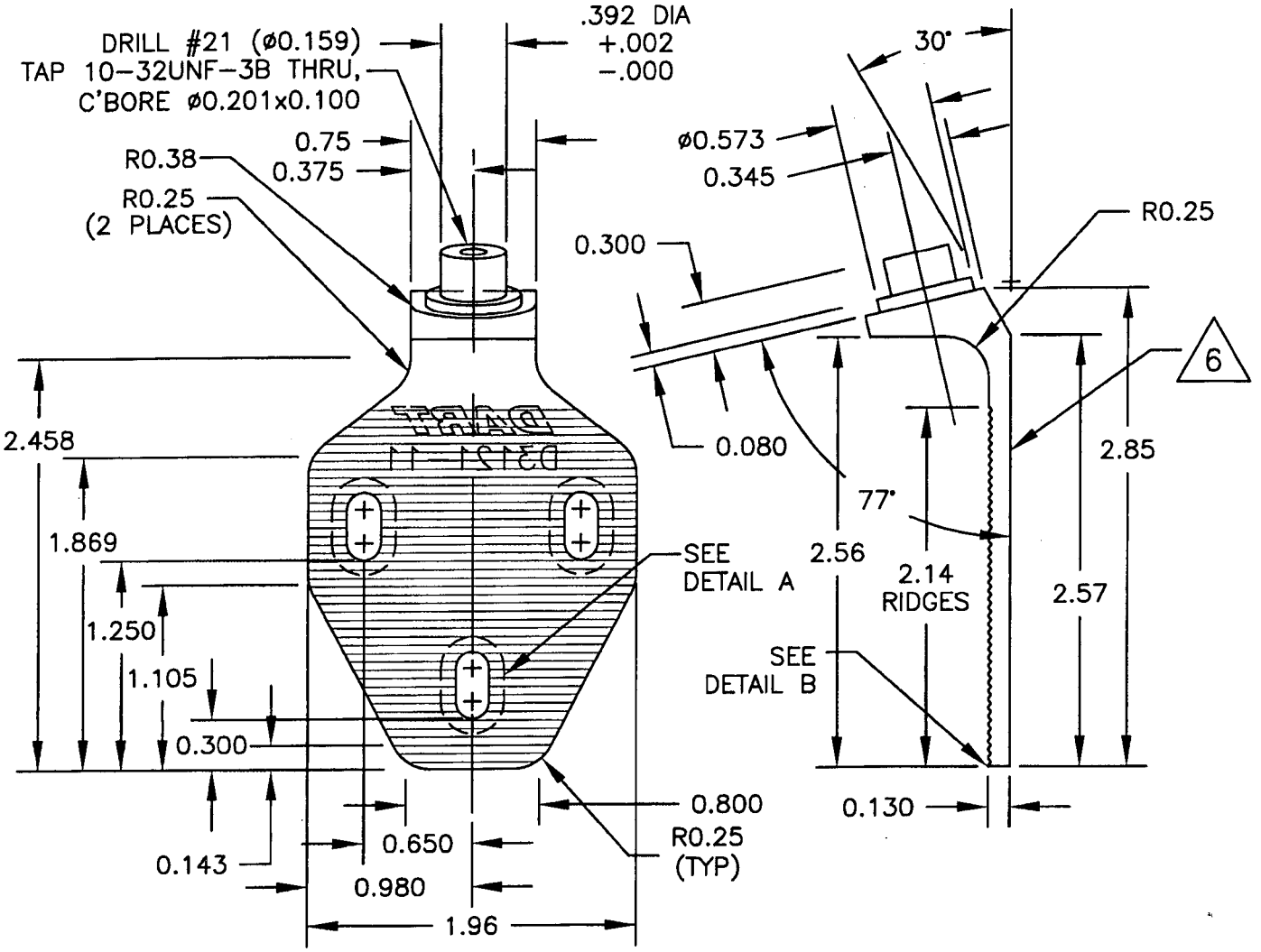
CHECKED	APPROVED	DRAWING NO. D3121	REV. D SHEET 4 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:1



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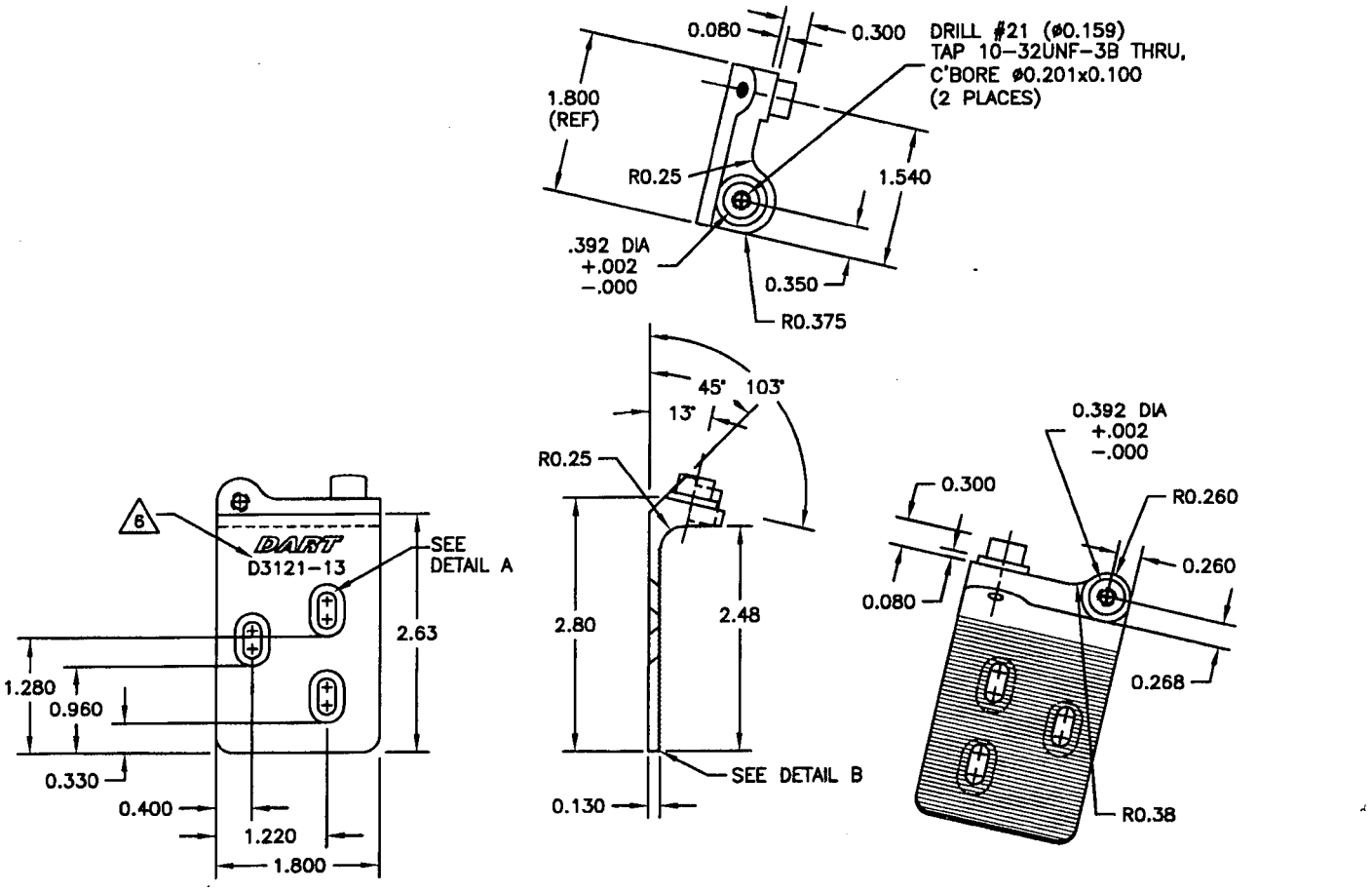
D3121-11 BRACKET

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
   MIN ULTIMATE TENSILE = 150 ksi
   MIN YIELD TENSILE = 100 ksi
2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES
4) BREAK ALL SHARP EDGES 0.005 TO 0.015
5) ENGRAVE DART P/N & LOGO AS SHOWN
6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3121	REV. D SHEET 5 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:2



D3121-13 BRACKET (SHOWN)
D3121-14 BRACKET (OPPOSITE)

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
   MIN ULTIMATE TENSILE STRENGTH = 150 ksi
   MIN YIELD TENSILE STRENGTH = 100 ksi
2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES
4) BREAK ALL SHARP EDGES 0.005 TO 0.015
5) ENGRAVE DART P/N & LOGO AS SHOWN
6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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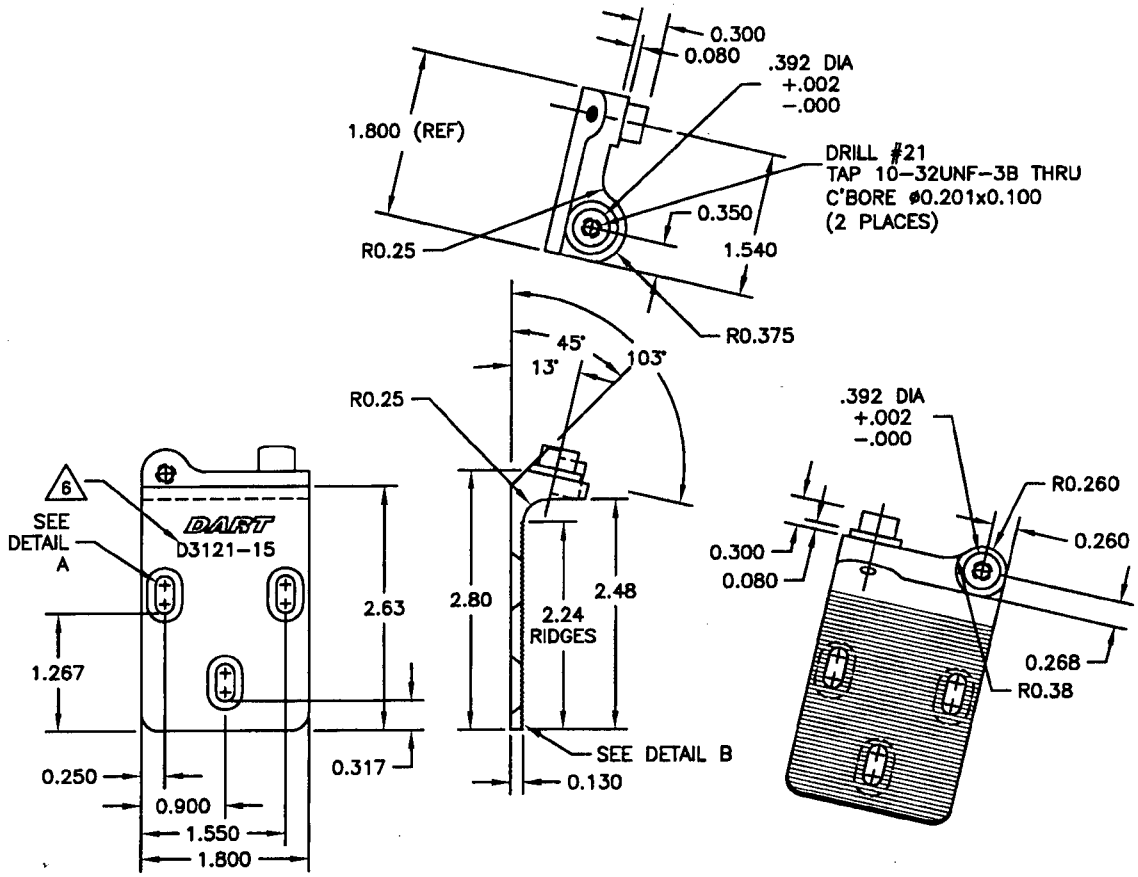
CHECKED	APPROVED	DRAWING NO. D3121	REV. D SHEET 6 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:2



D3121−15 BRACKET (SHOWN)
D3121−16 BRACKET (OPPOSITE)

1) MATERIAL: 17−4 SS PER AMS 5604/5643 (REF DART SPEC. M17−4−B)
   MIN ULTIMATE TENSILE = 150 ksi
   MIN YIELD TENSILE = 100 ksi
2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES
4) BREAK ALL SHARP EDGES 0.005 TO 0.015
5) ENGRAVE DART P/N AND LOGO AS SHOWN
6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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RELEASED
06-06-02

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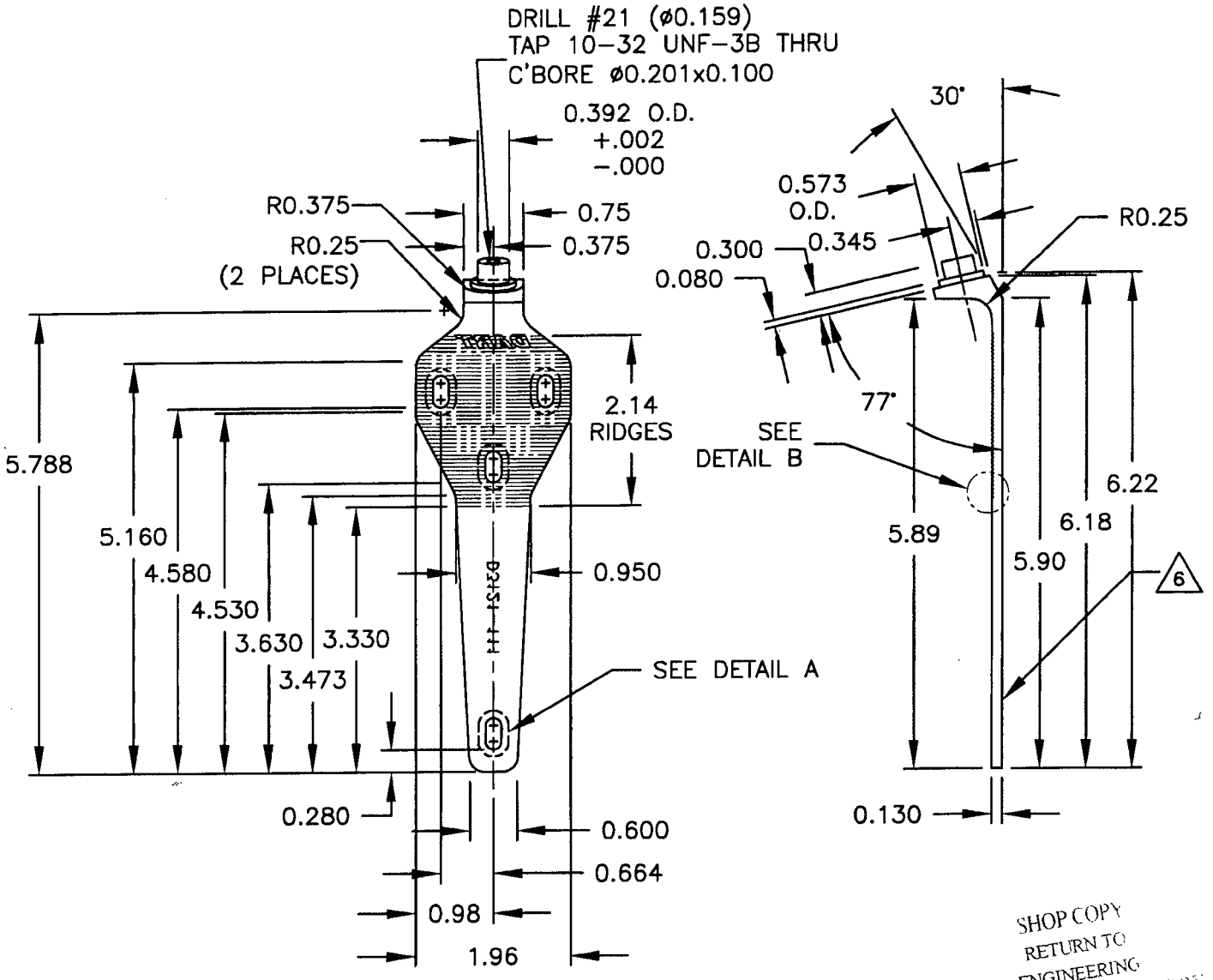
CHECKED	APPROVED	DRAWING NO. D3121	REV. D SHEET 7 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:2



D3121-111 BRACKET

1) REPLACES PREMIER P/N B32-23001-11
2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
   MIN ULTIMATE TENSILE = 150 ksi
   MIN YIELD TENSILE = 100 ksi
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHEWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES
5) BREAK ALL SHARP EDGES 0.005 TO 0.015
6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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RELEASED
06.06.02

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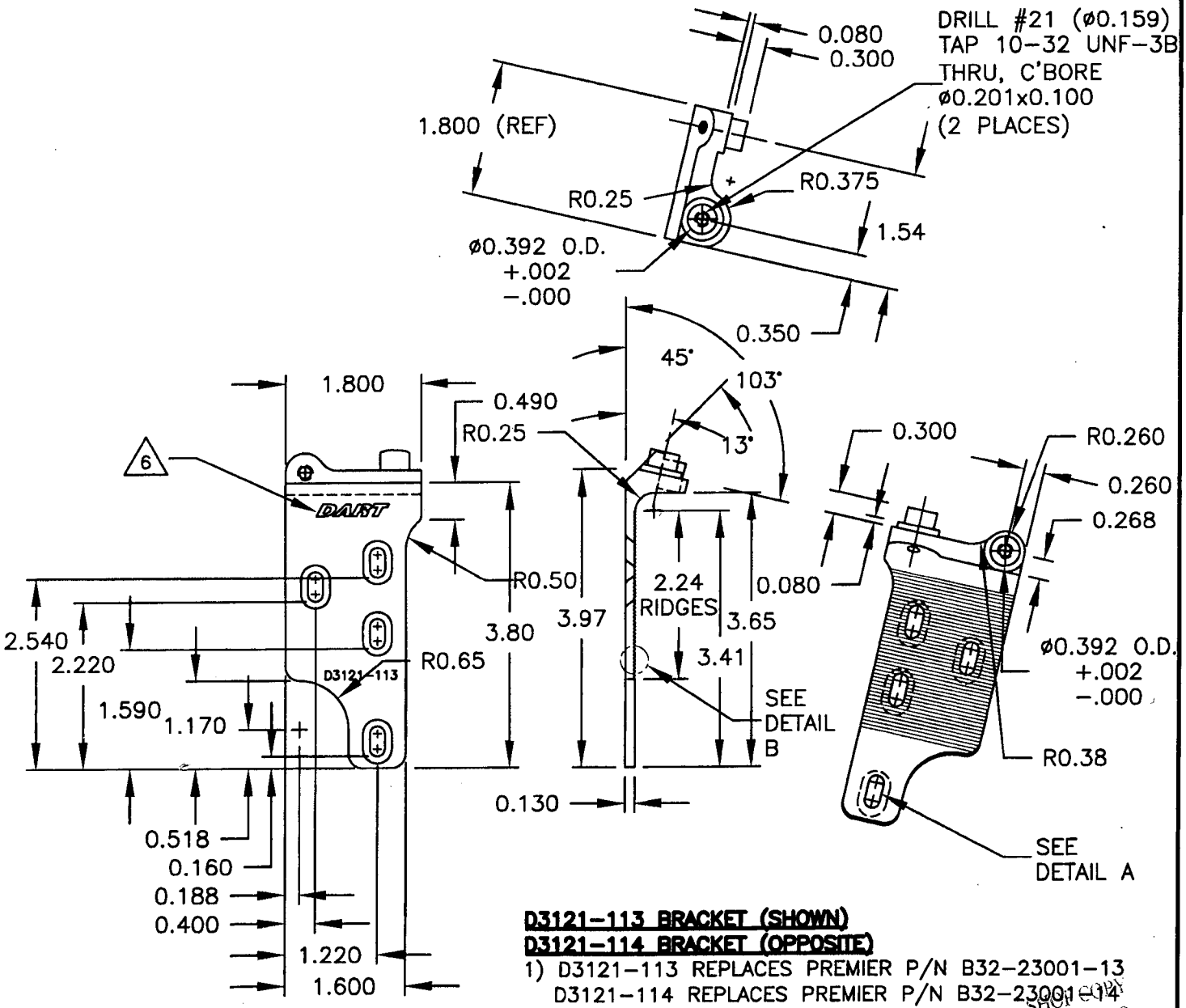
CHECKED	APPROVED	DRAWING NO. D3121	REV. D SHEET 8 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:2



D3121-113 BRACKET (SHOWN)
D3121-114 BRACKET (OPPOSITE)

1) D3121-113 REPLACES PREMIER P/N B32-23001-13
   D3121-114 REPLACES PREMIER P/N B32-23001-14
2) MATERIAL: 17-4 SS PER AMS 5604/5643
   (REF DART SPEC. M17-4-B)
   MIN ULTIMATE TENSILE STRENGTH = 150 ksi
   MIN YIELD TENSILE STRENGTH = 100 ksi
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES
5) BREAK ALL SHARP EDGES 0.005 TO 0.015
6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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06.06.02

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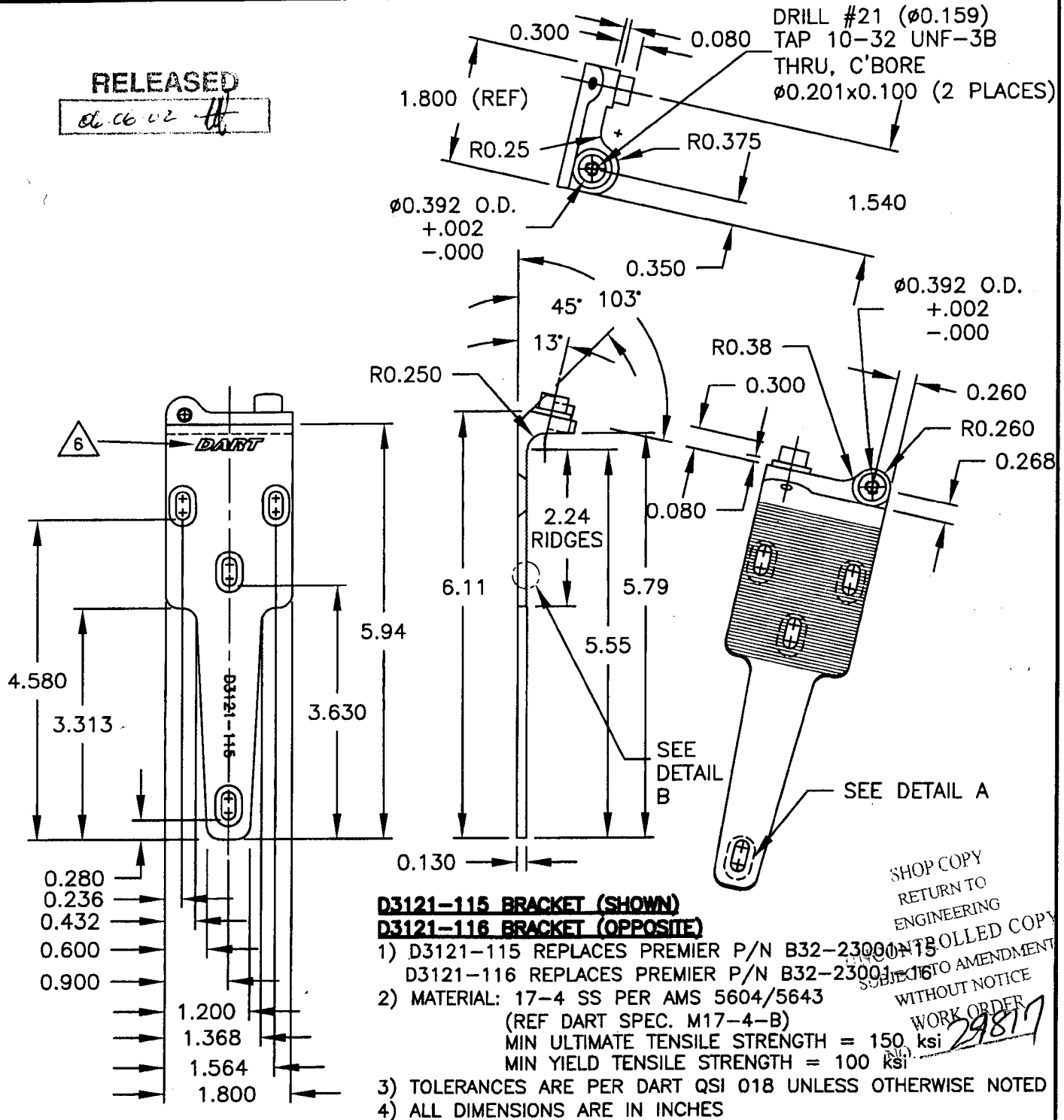
NO. 29817

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3121	REV. C SHEET 9 OF 10
DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2

RELEASED
06 06 02



D3121-115 BRACKET (SHOWN)
D3121-116 BRACKET (OPPOSITE)

1) D3121-115 REPLACES PREMIER P/N B32-23001-15
   D3121-116 REPLACES PREMIER P/N B32-23001-16
2) MATERIAL: 17-4 SS PER AMS 5604/5643
   (REF DART SPEC. M17-4-B)
   MIN ULTIMATE TENSILE STRENGTH = 150 ksi
   MIN YIELD TENSILE STRENGTH = 100 ksi
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES
5) BREAK ALL SHARP EDGES 0.005 TO 0.015
6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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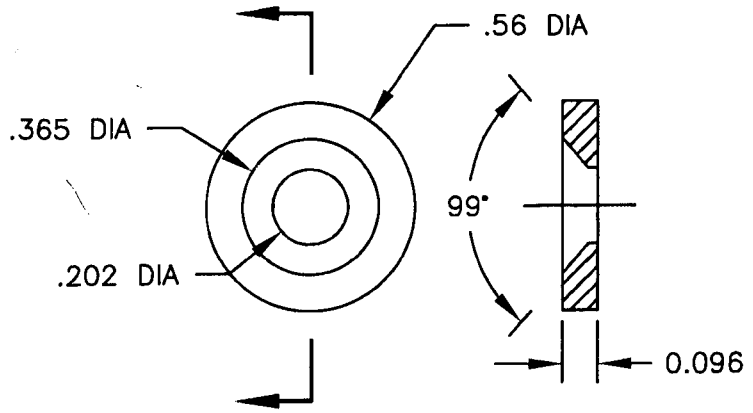
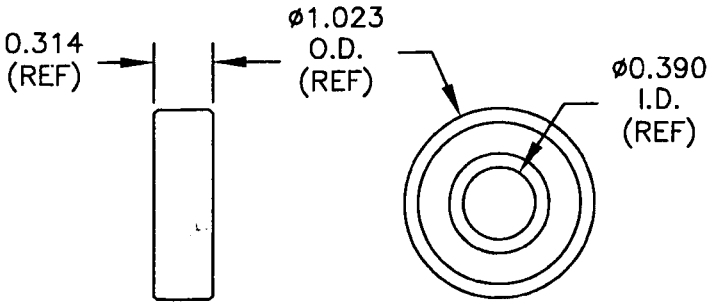
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3121	REV. D SHEET 10 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:1



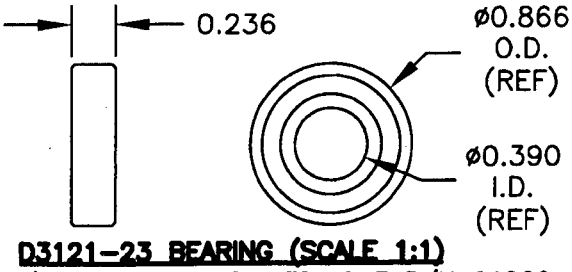
D3121-17 WASHER (SCALE 2:1)

1) REPLACES PREMIER P/N B32-23001-17
2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES
5) BREAK ALL SHARP EDGES 0.005 TO 0.015



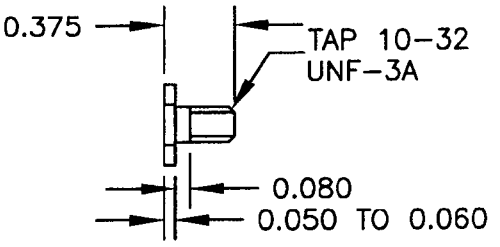
D3121-19 BEARING (SCALE 1:1)

1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM
FAFNIR P/N 9100KDD
2) ALL DIMENSIONS ARE IN INCHES



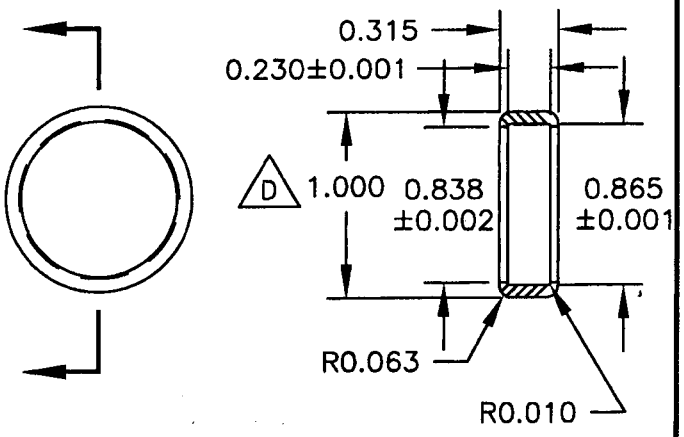
D3121-23 BEARING (SCALE 1:1)

1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z
OR KML P/N 6900-ZZ
2) ALL DIMENSIONS ARE IN INCHES



D3121-21 BOLT (SCALE 1:1)

1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
2) FINISH: NONE
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES
5) BREAK ALL SHARP EDGES 0.005 TO 0.015



D3121-25 CAP (SCALE 1:1)

1) MATERIAL: DELRIN ROD, ø1.25
(REF DART SPEC. M-DELRIN-R1.250)
2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES

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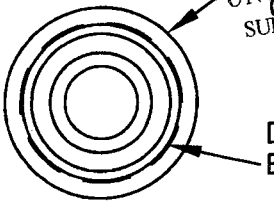

D3121-241 BEARING ASSEBLY (SCALE 1:1)